



## APPLICATION

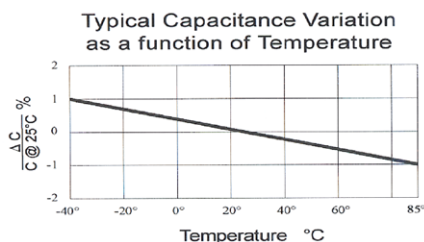
**LCR Polystyrene Capacitors** are recommended for use in I.F transformers, tuned circuits, pulse networks, laboratory standards, timing circuits, analogue and digital computing circuits and many other applications where superior qualities are used to advantage.

### LCR Polystyrene Film Capacitors offer:

- Low Temperature Coefficient
- Close capacitance tolerance
- Extreme capacitance stability
- Low power factor
- High Q
- High insulation resistance
- Small physical size

## SPECIFICATION

|                                              |                                              |
|----------------------------------------------|----------------------------------------------|
| Capacitance Range                            | 10pF - 200,00pF                              |
| Capacitance Tolerance                        | ±20%, ± 10%, ± 5%<br>± 2.5%, or ± 1pF        |
| Voltage (DC working)                         | 30, 63, 160, 400, 630V                       |
| Operating temperature range                  | -40°C to +85°C                               |
| Temperature Coefficient                      | N 150 ± 50 ppm/°C                            |
| Power Factor                                 | < 0.0005                                     |
| Insulation Resistance (dry)                  | > 106 MΩ                                     |
| Insulation Resistance (after humidity cycle) | >50,000 MΩ                                   |
| Test Voltage                                 | All caps tested at 2.5 times working voltage |
| Approvals                                    | BS, EN, ISO 9001-2008                        |



## DESCRIPTION

Polystyrene is a superior dielectric material with exceptionally high insulation resistance and low loss.

Aluminium foil electrodes are used and terminal wires are welded to them to ensure satisfactory performance at low voltage and frequency.

### Marking

Wherever possible capacitance, tolerance and working voltage are clearly indicated by black digital lettering, but on small components a letter code is used for tolerance and voltage (see overleaf)

## CAPACITANCE TOLERANCE CODE

|      |   |
|------|---|
| 1pF  | F |
| 2.5% | H |
| 5%   | J |
| 10%  | K |
| 20%  | M |

## VOLTAGE LETTER CODE

|       |   |
|-------|---|
| 30 V  | Z |
| 160 V | X |
| 400 V | V |
| 630V  | U |

## CAPACITANCE STABILITY

| Capacitor Length | Long Term Stability |
|------------------|---------------------|
| 10 mm and over   | ± (0.2% + 0.4pF)    |
| 8 mm             | ± (0.5% + 0.4pF)    |

## TERMINATIONS: TINNED COPPER WIRE

| Capacitor Length (mm) | Wire Diameter (mm) |
|-----------------------|--------------------|
| 8 mm                  | 0.3                |
| 10 mm                 | 0.4                |
| over 10 mm            | 0.6                |

Twin twisted 0.6 mm wires are used on capacitors above 50,000 pF.

| Voltage | Capacitance pF    | Length<br>mm<br>Nominal | Diameter<br>mm<br>Nominal |
|---------|-------------------|-------------------------|---------------------------|
| 30 V    | 10 - 1,000        | 8.0                     | 4.0                       |
|         | 1,001 - 2,000     | 8.0                     | 4.5                       |
|         | 2,001 - 3,000     | 8.0                     | 5.0                       |
|         | 3,001 - 5,000     | 10.0                    | 5.5                       |
|         | 5,001 - 7,500     | 10.0                    | 6.5                       |
|         | 7,501 - 30,000    | 15.0                    | 9.0                       |
|         | 30,001 - 50,000   | 20.0                    | 10.0                      |
|         | 50,001 - 100,000  | 30.0                    | 11.0                      |
|         | 100,001 - 200,000 | 30.0                    | 15.0                      |
| 63 V    | 10 - 500          | 8.0                     | 4.0                       |
|         | 501 - 750         | 8.0                     | 5.0                       |
|         | 751 - 1,000       | 10.0                    | 5.5                       |
|         | 1,001 - 2,200     | 10.0                    | 6.0                       |
|         | 2,201 - 5,000     | 10.0                    | 8.0                       |
|         | 5,001 - 6,800     | 15.0                    | 8.0                       |
|         | 6,801 - 10,000    | 15.0                    | 8.0                       |
|         | 10,001 - 15,000   | 15.0                    | 10.0                      |
|         | 15,001 - 40,000   | 20.0                    | 15.0                      |
| 160 V   | 40,001 - 100,00   | 30.0                    | 15.0                      |
|         | 10 - 250          | 8.0                     | 4.0                       |
|         | 251 - 500         | 8.0                     | 5.0                       |
|         | 501 - 1,000       | 10.0                    | 6.0                       |
|         | 1,001 - 4,000     | 10.0                    | 8.0                       |
|         | 4,001 - 7,500     | 15.0                    | 9.5                       |
|         | 7,501 - 40,000    | 20.0                    | 15.0                      |
|         | 40,001 - 100,000  | 30.0                    | 18.0                      |
| 400 V   | 10 - 100          | 8.0                     | 4.0                       |
|         | 101 - 470         | 10.0                    | 6.0                       |
|         | 471 - 1,000       | 10.0                    | 8.0                       |
|         | 1,001 - 2,000     | 10.0                    | 9.0                       |
|         | 2,201 - 5,000     | 15.0                    | 12.0                      |
|         | 5,001 - 15,000    | 20.0                    | 15.0                      |
|         | 15,001 - 50,000   | 30.0                    | 20.0                      |
|         | 50,001 - 100,000  | 44.0                    | 25.0                      |
| 630 V   | 10 - 100          | 10.0                    | 5.0                       |
|         | 101 - 250         | 10.0                    | 6.0                       |
|         | 251 - 1,000       | 10.0                    | 9.0                       |
|         | 1,001 - 3,000     | 15.0                    | 10.0                      |
|         | 3,001 - 7,500     | 20.0                    | 14.0                      |
|         | 7,501 - 40,000    | 30.0                    | 23.0                      |
|         | 40,001 - 100,000  | 44.0                    | 25.0                      |